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MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

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John C. Orth, Director

CONSERVATION DISTRICTS DIVISION

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March 16, 1977

Senator W. Gordon McOmber, President of the Senate
Representative John C. Driscoll, Speaker of the House
Forty-fifth Legislative Assembly
Helena, MT 59601

Gentlemen:

Enclosed is a second progress report concerning the sediment control study directed by SJR 52 of the Second Session of the Forty-third Legislative Assembly.

As you will note from this report, more time is needed to complete the study to satisfy the terms of the EPA grant which, in a major part, will accomplish the directives of SJR 52.

Hopefully, we can report with firm recommendations to the 1979 Legislature.

Sincerely,

John C. Orth

JOHN C. ORTH, DIRECTOR
DEPARTMENT OF NATURAL RESOURCES
AND CONSERVATION

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SECOND PROGRESS REPORT

SUBMITTED UNDER SJR 52 OF THE 1974 LEGISLATIVE ASSEMBLY

March 1977

Lewis and Clark Conservation District's Pollution Abatement Program

Background

Senate Joint Resolution 52

A joint resolution of the 1974 Legislature (SJR 52) requested the Montana Department of Natural Resources and Conservation (DNRC) and its Resource Conservation Advisory Council (RCAC) to make a thorough study of sediment control problems and existing legislation. Recommendations were called for to include proposed rules and standards and anything else that would be needed to establish a statewide program for the control of soil erosion and sediment damage.

A cross-section of agencies, organizations, and interested persons worked as a task force to make the study. Preliminary findings of the DNRC and the RCAC included the following:

1. Existing laws are probably sufficient to deal with sediment control.
2. Education is a prime need -- if people understand what is necessary for good water quality management, they will make efforts to act accordingly.
3. If mandatory controls are needed, they should be administered and enforced at the local level.

The DNRC and RCAC also concluded that additional time and effort would be necessary to adequately accomplish the purposes of SJR 52, and recommended that the sediment control study be continued and reported to the 1977 legislative session.

In order to conduct a more thorough study, the DNRC, RCAC, and Montana Association of Conservation Districts (MACD) recommended that the Environmental Protection Agency (EPA) be approached for a grant. A proposal was written by the Montana Department of Health and Environmental Sciences (DHES) explaining the structures and authority of conservation districts to the EPA in June 1974.

EPA Grant to DHES

The EPA approved a grant to the DHES in the amount of $145,000 to be used for assessing the statewide sediment situation and for setting up a "model" district to demonstrate whether local governmental entities can formulate, approve, and police their own regulations on sediment control and water quality. Several conservation districts volunteered to serve as the model. The Lewis and Clark Conservation District was selected because it offers a wide diversity of sediment control situations typical of Montana. The program now underway is the only program of its kind in the nation.

An Overview of Lewis and Clark County

The Lewis and Clark Conservation District includes all of Lewis and Clark County except the incorporated towns of Helena and East Helena. The following natural components of Lewis and Clark County were inventoried and studied for sediment problems.

Land Use. Agriculture is a leading industry in the county; the largest percentage of land area is used for growing livestock. The total 2,218, 240 acres (excluding urban and built-up areas, U.S. Forest Service and Bureau of Land Management lands) of land area in the county are partially used for the following purposes: rangeland, with 739,290 acres, covers 65% of the land area; forest land with 280,074 acres, takes 25% of the land area; pasture and hay land; consisting of 50,784 acres, comprises 5% of the land area; cropland, with 49,816 acres, covers 4% of the land area; and other land uses account for 13,337 acres, about 1% of the land area.

Water. The Missouri River is the major drainage feature of the county. The headwaters of the Blackfoot River are in central Lewis and Clark County on the west side of the divide, and the Sun River forms the northern boundary of the county.

There are three main water storage facilities on the Missouri River. The

largest is the Canyon Ferry Reservoir with a usable capacity of 2,043,000 acre-feet (used for power production, irrigation, flood control, and recreation). Hauser dam has a usable storage capacity of 52,100 acre-feet, and Holter dam has a usable storage capacity of 81,900 acre-feet.

Three other storage reservoirs are located in northern Lewis and Clark County. Gibson Reservoir on the Sun River has a capacity of 105,000 acre-feet; Willow Creek Reservoir on Willow Creek near Augusta has a capacity of 32,300 acre-feet; and Nilan Reservoir on Smith and Ford Creeks west of Augusta has a capacity of 10,090 acre-feet.

Small streams provide a year-long source of water for irrigation, livestock, and domestic needs. Among these streams are the Elk, Ford, and Smith Creeks in northern Lewis and Clark County; the Dearborn River and Flat Creek in the central part of the county; and Prickly Pear, Ten-Mile, and Canyon Creeks in the southern part of the county.

Methodology

A county inventory of erosion and sediment problems was conducted to discover where and why problems exist, and to establish appropriate management practices to control them. The inventory is supplemented by photographs to confirm descriptions of problem areas. Also, turbidity readings have been taken in streams above and below problem areas to support findings of excessive sediment loss.

Areas of Excessive Soil Loss. In the inventory, the county has been divided into four major and sub-major drainage areas. The next step was to further break these down into individual watersheds and pinpoint the critical areas of land-disturbing activities contributing to excessive soil loss. Some examples are as follows:

1. Mountainous areas. Homesites and roads are being built in mountainous areas with no consideration of problems such development may cause.

Examples of erosion and sediment problems may be found in the upper Wolf Creek and Gladstone Creek watersheds.

2. Streams. Floodplains and benches adjacent to streams are used for irrigated crops and hay. Flood irrigation predominates, causing excessive soil loss due to inadequate distribution systems, overapplication of water for the holding capacity of the soil, and poor irrigation return structures.

   Streambank and gully erosion are the greatest contributors to excessive erosion and sediment yield. This is most noticeable on the Sun River where it leaves the county; however, problems exist also on Flat Creek and on other streams within the county.

3. Rangelands. For the most part, the rangelands of Lewis and Clark County are in fair-to-good condition. However, some rangeland has been overgrazed; consequently, the rangelands could be greatly improved with the proper treatment.

4. Uplands. For the most part, the rolling uplands, which are in dry cropland, do not contribute excessive sediment yields. There are some areas, however, where erosion control practices, such as grass waterways, contour farming, and barrier strips, could be employed.

Overall, Lewis and Clark County has no large areas that can be considered "critical accelerated erosion areas." There are, however, some isolated examples of excessive erosion.

Sediment Control Project Organization

After the $145,000 EPA grant was awarded to DHES under the heading of "Statewide Sediment Control Project" (attachment 2), the DHES contracted with the Lewis and Clark Conservation District to be responsible for conducting the program within the district. A three-person staff was hired: a project manager, an environmental planner, and a water quality specialist. The staff members work together under the general supervision of DNRC and DHES, and at the direction of the Lewis and Clark County Conservation District supervisors.

Almost immediately a State Policy Advisory Committee was organized, with the assistance of Ole Ueland, Administrator of the Conservation Districts Division of the DNRC and Steve Pilcher, Water Quality Specialist from the DHES. This committee consists of approximately 30 persons representing federal and

state agencies, the legislature, conservation districts, agriculture, and other disciplines selected from throughout the state. This committee has assisted in providing guidelines in developing reasonable and acceptable conservation standards in various land uses, including dry and irrigated cropland, rangeland, forestry, and construction. In addition, the State Policy Advisory Committee provided input on the sediment control ordinance, and it developed guidelines for a cost-effective analysis for erosion and sediment control.

A Local Policy Advisory Committee was organized also, consisting of 60 landowners from Lewis and Clark County. These committee members were selected by the district supervisors primarily for demonstrated leadership potential and expertise in various land uses.

Both committees were subdivided into the following subcommittees: irrigated cropland, dry cropland, rangeland, forest land, construction and subdivision, mining, and an information and education committee. Attachment 3 explains the purposes, goals, and objectives of each subcommittee.

Public Information and Education

Experience has shown that most landowners do not know what a conservation district is and are unaware of the conservation district law. Part of the sediment control program, therefore, has been to broaden the dissemination of information on these subjects. It is felt that through adequate public education, the qualified electors will realize the significance of the ordinance and the referendum vote required to enact the ordinance into law.

A conservation district is organized by the citizens of a community under provisions of state law. It is a subdivision of state government but is not directed by the governor, the state legislature, any agency of state government, or the federal government. A conservation district is directed by the cooperators of the district through an elected governing body called the Board of

Supervisors. The Board decides upon a district-wide annual and long-range program, and formulates a plan of action yearly. It then obtains assistance from public or private sources to put the program into effect.

The primary objective of the conservation district is to bring about a total conservation program on every farm and ranch in the district. The Montana State Conservation District Law, passed by the Legislature, provides the district supervisors with broad powers to conduct surveys of erosion and sediment damage, to instigate erosion prevention and control measures, and to develop comprehensive plans for the conservation of soil resources and the prevention of soil erosion. The districts also have the power to adopt land use regulations in the interest of conserving soil and preventing or controlling erosion. This authority has never been used partially due to the law's requirement of a referendum vote before regulations can be adopted.

Information concerning the sediment control program has been disseminated to the public through various written materials, news media, and other methods. Specifically, the following activities have been successfully completed:

--ten articles have appeared in the Lewis and Clark Conservation District newsletter

--five articles have appeared in the Montana Association of Conservation District's newsletter

--300 copies of the Lewis and Clark Conservation District's sediment control bulletin have been distributed

--400 copies of a sediment control letter have been distributed

--400 litter bags labeled "Lewis & Clark Conservation District Sediment Control Program" have been distributed

--200 conservation district bumper stickers have been distributed

--two articles have appeared in the Montana Farmer-Stockman Magazine

--news articles have appeared in the Helena Independent Record and the Great Falls Tribune

--two radio interview programs of 30 and 45 minutes' duration

--two slide shows have been shown to several public groups

In addition, the Lewis and Clark Conservation District ran a booth at the three-day county fair. A model showing good and poor land management practices was displayed. Signs placed around the booth highlighted significant points of the sediment control project. Some of the estimated 600 persons who viewed the booth display stopped to discuss the project in greater detail.

Program staff have also attended various meetings for the purpose of informing others of the sediment control project.

During 1976, the sediment control staff conducted the annual county agribusiness tour for the conservation district in cooperation with the Chamber of Commerce. The theme was sediment control as it relates to water quality. With the assistance of a bus equipped with loudspeakers, the staff had the opportunity to inform people along the route, and at stop-points, of the importance of controlling erosion and sediment problems.

Future Plans

Section 208 Water Quality Management Planning

The "208" law resulted from certain amendments to the Federal Water Pollution Control Act of 1972, administered by the EPA. Section 208 provides for a localized approach to pollution problems by authorizing the individual states to assess the nature and extent of various forms of point and nonpoint sources of water pollution. It also provides funding for such studies, which are to include recommendations for the implementation of reasonable and effective pollution abatement programs.

At present, EPA's goals are for ongoing programs by 1977, water clean enough to fish or swim in by 1983, and no pollutant discharges at all by 1985. Section 208 calls for water quality management programs in local areas designated

by the Governor. Montana's Governor Thomas L. Judge has designated four areas (see map): Mid-Yellowstone (Yellowstone, Big Horn, Carbon, Stillwater, and Sweetgrass Counties); Yellowstone-Tongue (Powder River, Carter, Fallon, Custer, Rosebud, and Treasure Counties); Flathead Valley APO (Flathead and Lake Counties); and Blue Ribbon of Big Sky (Gallatin County and the eastern portion of the Madison Conservation District). Indian lands within these counties are included also. In addition, areas of the state not included within the Governor's designated 208 areas are participating in similar planning under the statewide 208 project.

The goals and objectives of all 208 planning are similar -- to determine effective solutions to water quality degradation associated with waste discharges and land use practices, and to develop plans and recommend methods of putting these solutions into effect. The four 208 designated areas are scheduled to have completed plans by the end of 1977; however, the Statewide 208 Project will be completed by late 1978, as it was initiated a year later. The Water Quality Bureau of the DHES is responsible for coordinating all of the 208 planning efforts conducted in the state.

Due to the lack of prior attention, the major emphasis in the 208 planning process is being placed on the nonpoint source pollution problems originating primarily from man's influence on and use of the land. Excessive sediment loads, dewatering, and increasing salinity have been identified by the Water Quality Bureau as the three most critical water quality problems currently facing Montana. A comprehensive questionnaire on the nature and extent of agricultural nonpoint source pollution has been developed to be used in Lewis and Clark County and the other nondesignated 208 counties (attachment 4). Most of the information requested on this questionnaire will be obtained from the Soil Conservation Service's "Conservation Needs Inventory" reports, Soil Conservation Service (SCS) personnel, conservation district supervisors, local Conservation

Resource Development committees, the Soil Conservation Service's land use maps, and personal observations.

As the Statewide 208 and Statewide Sediment Projects have overlapping objectives, the two projects will be working cooperatively on an inventory of soil erosion and sediment problems in areas of the state not included within a 208-designated area. It is hoped that this inventory will be completed by June 1977. Similar, but more intensive, inventories are being conducted in the four 208-designated areas.

Approval of the Lewis and Clark Conservation District's sediment control ordinance may influence the course of the Section 208 planning agencies by demonstrating that conservation districts are ready and willing to accept the responsibility of administering their own programs. At this time, 208 planning agencies indicate that they believe conservation districts are the most logical and well-equipped entities to assume leadership in the control of nonpoint source pollution.

Activities Planned

1. Develop a slide show and discussion centered around the theme "What is a Conservation District?"

2. Conduct additional meetings with the Lewis and Clark County Advisory Committees.

3. Conduct community meetings to promote public awareness, involvement, and input to the proposed sediment control ordinance.

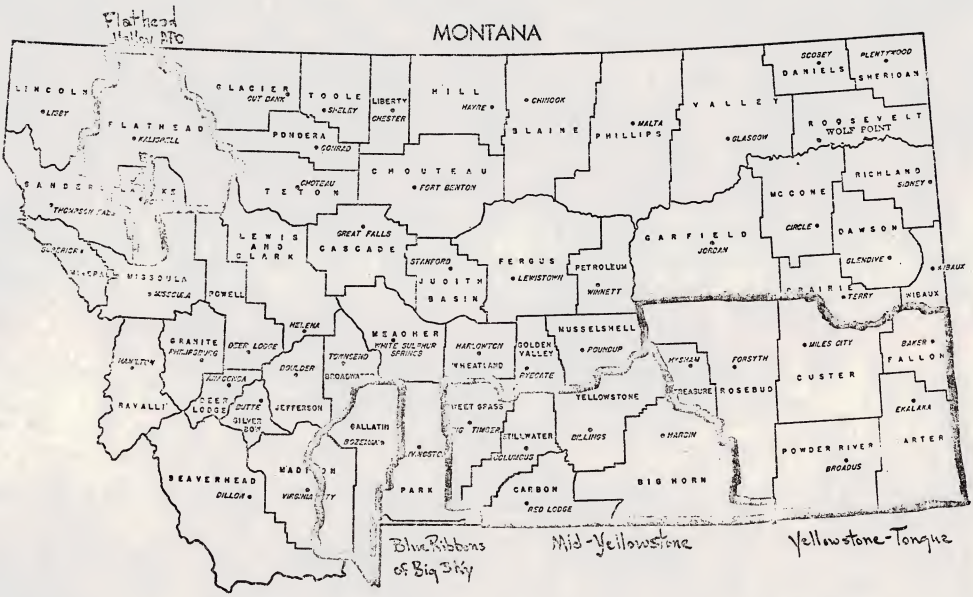
4. Meet with rural development committees and supervisors to complete questionnaires assessing sediment problems in each of the U.S. Geological Survey-identified subbasins within Lewis and Clark County.

5. Develop conservation guidelines, identifying water quality as an objective in soil conservation programs.

6. Conduct the referendum vote on the sediment control ordinance.

7. Assist with implementation of ordinance if referendum vote is favorable; analyze results and work new approach if vote is unfavorable.

8. Determine whether further legislation is necessary.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BROADUS
ARTER
BEAVERHEAD
DILLON
MADISON
VIRGINIA CITY
PARK
CARBON
RED LODGE
BIG HORN
Blue Ribbons of Big Sky
Mid-Yellowstone
Yellowstone-Tongue

Sediment Control Ordinance

In order to develop a sediment control program that could be administered within the jurisdiction of the Montana Conservation District Law, it became necessary to develop an ordinance. Section 76-109, R.C.M. 1947 authorizes a conservation district to formulate regulations within that district to conserve soil and water resources and to prevent and control erosion. The ordinance (included in this report as attachment 1) has progressed through four drafts, and has been reviewed by the conservation district supervisors, the Conservation Districts Division of the DNRC, the Water Quality Bureau of the DHES, all of whom have supervisory responsibility for the sediment control program. Significant input has also come from the State Policy Advisory Committee established to provide guidance in conservation standards and sediment control matters.

The Sediment Control Ordinance was designed with the following purposes in mind:

1. To comply with the intention of the Federal Water Pollution Control Act of 1972 (PL 92-500), which states that "...(1) it is the national goal that the discharge of pollutants into the navigable waters be eliminated by 1985; (2) it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983; ..."

2. To follow the basic recommendations of the Montana Legislature and the Governor's Sediment Control Conference, which expressed the following concept (Sediment Control Task Force):

> ...the responsibility for an erosion and sediment control program should be placed in the conservation districts which have the authority and the structure, under the conservation district law, to develop, implement, and administer a program for the control of erosion and sediment deposition. This responsibility would be in conjunction with, but would not replace, those state and local regulatory programs concerned with the quality of water resources and pollution abatement activities.

Eventually, this ordinance will be subject to a hearing at which input from all interested persons and agencies in the district will be solicited. In addition, it will be voted upon; if a majority of qualified electors vote in

favor of the ordinance it may become law.

Approval of the ordinance will serve the following useful purposes:

1. It will set the conservation standard for land occupiers within the conservation district boundary.

2. It will control the occasional operator who violates the district's standards for erosion and sediment control.

3. It will not dictate land use to the landowner, but is designed to help protect land occupiers within the conservation district from damage caused by accelerated soil erosion and sediment.

Attachment 1

Sediment Control Ordinance

FIFTH DRAFT

INTRODUCTION

The attached Lewis and Clark Sediment Control Ordinance has been developed for the following:

1. To comply with the intent of PL 92-500 (Federal Water Pollution Control Act Amendments of 1972).

2. To follow the basic recommendations of the Montana Legislature and the Governor's Sediment Control Conference...

   ...the responsibility for an erosion and sediment control program should be placed in the conservation districts which have the authority and the structure, under the conservation district law, to develop, implement and administer a program for the control of erosion and sediment deposition. This responsibility would be in conjunction with, but would not replace, those state and local regulatory programs concerned with the quality of water resources and pollution abatement activities.

Approval of this erosion and sediment control ordinance will serve the following useful purposes.

1. It sets the soil erosion and sediment control standards for land occupiers within the conservation district boundary.

2. It will provide the conservation district with the authority to deal with the occasional operator who violates the district's standards for erosion and sediment control.

3. It will not dictate land use to the landowner, but is designed to help protect land occupiers within the conservation district from damage caused by accelerated soil erosion and sediment.

We believe you will find the contents of this ordinance reasonable, the recommended land management practices have proven to be effective in the control of erosion and sediment deposition, and that the ordinance will be acceptable to you.

It is very important to recognize that PL 92-500 is a national mandate. This means that either a federal, state, or local agency will have authority for the administration of a sediment control program.

You now have the opportunity to retain this authority at the local level by casting your ballot for this ordinance, thereby giving your own conservation district this authority.

LEWIS AND CLARK COUNTY CONSERVATION DISTRICT
(SEDIMENT CONTROL ORDINANCE)

Section 1. TITLE

These rules may be cited as the "Lewis and Clark Conservation District Soil Erosion and Sediment Control Ordinance" as authorized in the Montana Conservation District Law (Section 76-109, R.C.M. 1947).

Section 2. POLICY

It is the policy of the conservation district to provide for the conservation of the soil and water resources of the district, and for the control and prevention of accelerated soil erosion and sediment damage to our land, water, and other resources.

Section 3. PURPOSE

It is the purpose of this ordinance to enact a comprehensive and coordinated erosion and sediment control program for the conservation and protection of land, water, and other resources of the district and thereby (a) use the land in accordance with its capabilities and treat it according to its needs; (b) prevent degradation of lands, streams, reservoirs, and lakes; and (c) protect and promote the health, safety, environment, and general welfare of the people.

Section 4. DEFINITIONS (For the purpose of this ordinance, the following definitions shall apply:)

(1) "Erosion" means the process by which the surface of the land is worn away by the action of water, wind, gravity, or a combination thereof.

(2) "Accelerated Erosion" means erosion much more rapid than normal, natural, or geologic erosion, primarily as a result of the influence of the activities of man.

(3) "Conservation Plan" means the properly-recorded decisions of the cooperating landowner or operator on how he plans to use his land within

its capability and to treat it according to its needs for the maintenance or improvement of soil, water and plant resources, including his plans for the control of soil erosion and sediment damage (plans are scheduled for review and update every three (3) years but may be updated at any time at the request of the land occupier).

(4) "Conservation Standards" means the standards and specifications adopted by the district pursuant to Section 5 of this ordinance.

(5) "District" or "Conservation District" means the Lewis and Clark County Conservation District, an existing legal subdivision of the State of Montana. The boundaries of the district include all the territory within Lewis and Clark County excepting the incorporated cities of Helena and East Helena as of 1948 (refer to attached boundary map).

(6) "Construction and Subdivision Activity" means any soil disturbance associated with construction and subdivision activities.

(7) "Land Occupier" means any person, firm, corporation, municipality, or other legal entity who shall hold title to, or shall be in possession of, any lands lying within the conservation district, whether as owner, lessee, renter, tenant, or otherwise. Where the term land occupier is used in this ordinance, the term shall include both the owner and the occupier of this land when they are not the same.

(8) "Operator" (forestry activities) means the person responsible for the timber harvesting activities.

(9) "Person" means any natural person, individual, corporation, firm, partnership, association, or other legal entity.

(10) "Sediment" means the solid material, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice, and has come to rest on the earth's surface.

(11) "Sediment Damage" means the economic or environmental damage caused to any person or natural resource resulting from accelerated soil erosion as determined by the supervisors.

(12) "Supervisors" or "District Supervisors" means the board of supervisors of the Lewis and Clark County Conservation District.

(13) "Water" means any and all surface waters, public or private which are contained within, flow through, or border upon Lewis and Clark County.

(14) "Team" (comprised of three members) means one of the supervisors or their designated representative; one representative of the State Forestry Division of the Montana Department of Natural Resources and Conservation with qualifications in erosion and sediment control, or a USDA Soil Conservation Service technician with qualifications in erosion and sediment control; and the land occupier, operator, or their designated representative.

(15) "Timber Harvesting" means any activity related to the cutting or removal of forest tree species for commercial use.

Section 5. CONSERVATION STANDARDS

(A) The district adopts as minimum conservation standards for the control of accelerated soil erosion and sediment, the standards and specifications developed and recommended by the USDA Soil Conservation Service and the timber harvest guidelines for erosion and sediment control developed by the Montana State Forestry Committee, and any subsequent revisions or additions as approved and adopted by the district supervisors.

(B) The conservation standards shall include criteria, techniques, and methods for control of accelerated soil erosion and sediment damage resulting from various land-disturbing activities.

(C) Any proposed changes in the district's conservation standards shall require adequate public notice prior to the adoption by the supervisors of the new changes.

(D) Any qualified elector within the district may at any time file a petition with the district supervisors asking that any or all of the conservation standards adopted pursuant to this ordinance be amended, supplemented, or repealed.

(E) If corrective measures are necessary for which there are no applicable conservation standards, the soil erosion and sedimentation problem shall be corrected with practices which the supervisors deem appropriate or may establish consistent with the policy and purpose of this ordinance.

(F) The conservation standards shall be available for public inspection during normal office hours at the Lewis and Clark County Conservation District office located in Helena, Montana.

Section 6. COMPLAINTS

(A) Any person may file a written complaint against any land occupier within the district alleging that accelerated soil erosion and sediment damage has occurred or is occurring and charging that the conservation standards of the district are not being observed.

(B) The complaint shall: (1) be in writing, signed, notarized, and delivered to the district office; (2) include the location of the alleged violation; (3) describe the source, nature, and extent of the sediment damage alleged to have occurred or is occurring; and (4) become public record on file at district office.

Section 7. ACTION INITIATED BY COMPLAINTS

(A) The supervisors or their designated representative upon the receipt of a complaint conforming with Section 6 that sediment damage is alleged to have occurred or is occurring, shall notify the alleged violator within five (5) working days after receipt of the complaint at the district office and arrange for a time with the land occupier or his designated representative to conduct an investigation within twenty (20) days to

determine whether an actual violation exists. The complainant shall be notified of the time of the investigation and will be given the opportunity to be present when the investigation is conducted. The district investigation shall include where deemed appropriate:

1. soils information;
2. location of the alleged violation;
3. description of the source, nature, and extent of the sediment damages; and
4. a cost benefit analysis.

(B) Where, after the investigation, the supervisors determine that a violation does not exist, the land occupier shall be so notified in writing within five (5) working days with a copy to the complainant.

(C) Where the supervisors determine that the conservation standards are not being met, they will proceed to seek a voluntary solution to the problem using the following sequence:

1. The supervisors shall, within five (5) working days of the investigation, provide written notification to the land occupier that an apparent violation of the conservation standards exists with a copy to the complainant.
2. The supervisors or their designate representative shall, at the earliest possible date, discuss alternative solutions with the land occupier, offer technical assistance in bringing about an acceptable solution, and provide information regarding financial assistance.
3. The supervisors or their designate representative shall specify in writing a reasonable length of time to complete the corrective measures.
4. The supervisors or their designate representative shall inform the land occupier that he may use other than district assistance to bring about a satisfactory solution.

(D) If the land occupier disagrees with the results of the district's investigation, he shall be given an opportunity to meet with all of the supervisors at their next regular monthly meeting to review their decisions.

(E) If, after the meeting, the district finds no reason to reverse its prior decision, the district supervisors shall, within five (5) working days, notify the land occupier in violation by certified mail that he has twenty (20) days to adequately demonstrate to the satisfaction of the supervisors his intention to proceed voluntarily towards correction of the violation, after which time, if there remains no indication of definite action to initiate corrective measures, the district shall file a petition with the district court in accordance with Section 76-110, R.C.M. 1947 of the Montana Conservation District Law.

(F) The supervisors shall notify the complainant of their final decision concerning the district's procedure to correct the violation.

Section 8. AGRICULTURAL ACTIVITIES

(A) Any occupier of agricultural lands shall be considered in compliance with the erosion and sediment conservation standards as set forth in Section 5 of this ordinance if (1) his land is being managed in accordance with his conservation plan currently approved by the district, or (2) his land management practices meet or exceed the district's conservation standards.

(B) Any person planning to change more than five acres of grassland to cropland, except those lands normally in a cropland-grassland rotation system, shall notify the district, at least ten (10) days prior to, of his proposed land use change. This notification will include:

1. legal description of proposed land change;
2. acreage involved;

3. planned use (dry cropland, irrigated cropland, hayland, etc.). From information provided on the notification and other available data (soils, topography, district records, etc.), the district will make known to the land occupier where potential erosion problems may occur. Available technical assistance will be provided by the district, upon request by the land occupier, for erosion and sediment control measures.

Section 9. FORESTRY ACTIVITIES

(A) Any land occupier engaged in timber harvesting activities on private forest lands who has a district-approved conservation plan which includes a woodland management section for erosion and sediment control, or any land occupier who has a long-range timber harvesting plan which includes an erosion and sediment control section approved by the district and is conducting his operation in accordance with the plan, shall be deemed to be in compliance with this ordinance.

(B) Any land occupier planning to engage in the harvesting of timber and does not have a district approved erosion and sediment control section in his timber harvesting plan shall either (1) enter into a district cooperative agreement for a conservation plan as explained in Section 9-A, or (2) submit notification to the district office of his proposed timber harvesting plans on Lewis and Clark Sediment Control Form at least ten (10) working days prior to initiating any timber harvesting activities. Such notification shall include, but is not limited to, the following information:

1. name, address, and telephone number of landowner(s) and logging operator(s);
2. legal description of proposed timber harvesting activities;
3. percentage of tree stand to be harvested;

4. plat map of the area showing all water bodies and access and haul roads;

5. signatures of the landowner(s) and logging operator(s) agreeing to conduct all timber harvesting activities, which include the construction and location of all roads, in accordance with the adopted erosion and sediment control guidelines for timber harvest.

(C) The district supervisors or their designate representative shall review information provided on the notification form and other existing data (soils, topography, etc.) to determine whether the proposed activities may require a more comprehensive erosion and sediment control plan.

1. If it is determined that the proposed activities present no serious potential erosion and sediment problems, the land occupier will be notified in writing within five (5) working days that he may proceed with the timber harvesting.

2. If it is determined that an erosion and sediment control plan may be necessary to prevent potential sediment damage, the land occupier will be so notified in writing within five (5) working days that a team will conduct an on-site inspection. Such on-site inspection will be conducted on a date agreed upon by the land occupier and the supervisors or their designate representative.

   a. If, after the on-site inspection, the team determines that a comprehensive erosion and sediment control plan is not necessary, the land occupier will be notified in writing within five (5) working days of the investigation that he may proceed with his operations.

   b. If, after the investigation, the team determines that an erosion and sediment control plan is necessary, the supervisors or their designate representative shall within five (5) working days

of the investigation so notify the land occupier in writing and offer technical assistance as may be available for the development of a satisfactory erosion and sediment control plan.

(i) an acceptable erosion and sediment control plan shall be completed prior to any timber harvesting.

(ii) when the erosion and sediment control plan is acceptable to both the district and the land occupier, both parties will sign the plan agreeing to the terms specified therein.

Section 10. CONSTRUCTION AND SUBDIVISION ACTIVITY

(A) Any person engaged in construction and subdivision activities shall be considered in compliance with the terms of this ordinance if his activities are in accord with an erosion and sediment control plan previously approved by the district.

(B) Any person planning to engage in construction and subdivision activity shall submit an erosion and sediment control plan to the district supervisors at the Lewis and Clark County Conservation District Office for their approval prior to any land disturbance. The technical assistance of the district will be made available in the preparation of an erosion and sediment control plan.

1. An erosion and sediment control plan shall contain the following information:

   a. name, address, and telephone number of applicant;

   b. a topographic map showing location of proposed land disturbance;

   c. soils information map;

   d. a time schedule indicating the anticipated starting and completion dates of the development sequence and the length of time of exposure for areas of soil disturbance prior to the completion of effective measures for erosion and sediment control.

e. plans for all temporary or permanent erosion control measures.

2. The district shall, within thirty (30) days, review all plans submitted, and shall approve any such plans if it determines that the plan meets the conservation standards of the district. When a plan submitted for approval is found to be inadequate, the district may require such modifications, terms, conditions, etc., as will permit approval of the plan.

(C) Exclusions

1. Such minor land-disturbing activities as home use gardens and individual home landscaping, repairs, and maintenance work.
2. The construction of single-family residences when they are constructed by or under contract with the owner for his own occupancy.
3. The construction of farm buildings.
4. Any project carried out under the technical standards and specifications of the Soil Conservation Service of the USDA.
5. Any activity in which a plan has been submitted to a state or county agency which meets the conservation standards of the district.

Section 11. EMERGENCY LAND MANAGEMENT PRACTICES

No prior notification or application shall be required for emergency land management practices necessitated by and initiated during or immediately after fire, flood, windstorm, earthquake, structural failure or other catastrophic events. Within five (5) days after commencement of such activity, the land occupier shall notify the district supervisors of the action with an explanation of why emergency action was necessary. Reasonable care must be taken to minimize soil disturbance and erosion during the conduct of emergency land management practices.

Section 12. BOARD OF ADJUSTMENT

(A) A board of adjustment shall be established by adoption of this ordinance in accordance with the provisions of Section 76-111 of the Montana Conservation District Law.

(B) The board of adjustment shall be made up of three members, each to be appointed for a term of three years; except that the members first appointed shall be appointed for terms of one, two, and three years, respectively.

(C) The members of the board of adjustment shall be appointed by the Department of Natural Resources and Conservation with the advice and approval of the district supervisors. The members shall be, or have been, actively engaged in and considered to have expertise in the fields of agriculture, silviculture, and construction, respectively.

(D) All meetings of the board of adjustment shall be open to the public and all records and proceedings shall be public record.

Section 13. APPEAL TO THE BOARD OF ADJUSTMENT

Any person against whom a complaint has been filed may, within sixty (60) days after notification that a violation of this ordinance exists, appeal to the board of adjustment if there are practical difficulties or unnecessary hardships involved in his carrying out, upon his lands, the corrective measures recommended by the district supervisors. The board of adjustment shall have the power to authorize such variance where not contrary to the public interest or in denial of the spirit of the conservation standards.

Upon the decision reached by the board of adjustment, the district supervisors may appeal to the district court requesting that the order of the board of adjustment be modified or set aside in accordance with Section 76-111, R.C.M. 1947 of the Montana Conservation District Law.

Section 14. ORDER TO CEASE AND DESIST OPERATIONS

The district supervisors shall have authority to initiate a cease and desist order against any person causing land disturbance which is in violation of the erosion and sediment control conservation standards as set forth by this ordinance.

Section 15. COMPLIANCE WITH OTHER LAWS

Approval for any proposed land disturbance does not relieve, impair, diminish, divest, or control any existing laws of the State of Montana or the United States.

Section 16. PENALTY

(A) Any person violating the provisions of this ordinance is guilty of a misdemeanor, and, upon conviction, shall be punished by a fine of not less than twenty-five dollars ($25.00) nor more than five hundred dollars ($500.00) for each day that a person continues the unauthorized land-disturbing activity.

(B) Any person who violates the time provisions of this ordinance is guilty of a misdemeanor, and, upon conviction, shall be punished by a fine of five dollars ($5.00) per day.

Section 17. FINANCIAL ASSISTANCE

When a land occupier is required to apply conservation practices for the control of soil erosion and sediment damage, as specified by the supervisors, the supervisors may assist the land occupier to obtain, when deemed necessary, available cost-share funds from existing sources. If the supervisors determine that public funds should be made available to help correct a violation, the land occupier may be permitted to delay corrective measures until such time that the funds are made available. The lack of available funds might be considered a practical difficulty for the purposes of this ordinance, and may justify a variance from the time standards set by the supervisors.

The district is authorized to receive from federal, state, or other public or private sources, financial, technical, or other assistance for use in accomplishing the purposes of this ordinance.

Section 18. LIABILITY.

Neither the approval of a plan under the provisions of this ordinance, nor the compliance with the provisions of this ordinance shall relieve any person from the responsibility for damage to any person or property otherwise imposed by law, nor impose any liability upon the district for damage to any person or property.

Section 19. SEPARABILITY CLAUSE

If any section, clause or portion of this Ordinance shall be held by a court of competent jurisdiction to be invalid or unconstitutional, such find shall not affect any other section, clause, or portions of this ordinance.

Attachment 2

Statewide Sediment Control Project

STATEWIDE SEDIMENT CONTROL PROJECT

REQUEST FOR PROPOSAL No. WA-R474

submitted by:

Water Quality Bureau
Environmental Sciences Division
Montana Department of Health and Environmental Sciences
Helena, Montana 59601

August 4, 1975

REQUEST FOR PROPOSAL NO. WA 75-R474

August 4, 1975

STATEWIDE SEDIMENT CONTROL PROJECT

The State of Montana, like most western states, is faced with a wide variety of nonpoint source pollution problems. While these problems include such things as irrigation return flow, acid mine drainages, stream dewatering, and saline seep, a major problem appears to be sediment resulting from the lack of adequate conservation practices. Water quality inventory and management plans being completed for the 16 basins in Montana in accordance with Section 303(e), Public Law 92-500 as well as the Section 305(b) report, verify this fact. These documents provide us with some direction as to the sediment problem within each area, but do not contain the detailed information necessary to develop a workable sediment control program. To provide our agency with the needed information upon which to build a successful program, we are proposing a statewide sediment control study.

The proposal would include the following objectives:

1. Evaluate existing regulatory authority. Table No. 1 lists those laws and regulations dealing in some way with sediment control and the agencies responsible for administration of the same. Due to the number of agencies involved, it is necessary to review their authority to determine what type of interagency cooperation would result in the most effective control program.
2. Provide supplemental information regarding sediment problems and control to the water quality inventory and management plans currently being completed for the 16 designated basins in Montana.
3. Develop best management practices necessary for the control of erosion problems within the Lewis and Clark Soil Conservation District. These practices will be largely based on existing

knowledge of conservation practices and control techniques rather than on the results of any intensive monitoring program. These could then be adapted quite easily to other areas having similar problems. Montana water quality laws consider the fact that not all sediment is the result of man's activity and therefore define naturally-occurring conditions. This means conditions present from runoff over which man has no control or from developed land where all reasonable land, soil and water conservation practices have been applied. Best management practices could then become reasonable land, soil and water conservation practices.

4. Develop and initiate a sediment control program administered on a local level by a selected soil conservation district.
5. Conduct a cost-effective analysis for the implementation of the sediment control program and application of the required conservation practices.

The study which is proposed to accomplish these objectives can be broken into three basic phases. Phase 1 would consist of a thorough inventory of the nature and extent of nonpoint source pollution problems throughout the state. This would be accomplished by personal interviews with representatives of the soil conservation districts, U. S. Department of Agriculture, Soil Conservation Service, Cooperative Extension Service, and any other groups or individuals directly involved with practices and activities which could result in nonpoint source pollution problems. This information could then be compared to that included in the water quality inventory and management plans previously prepared to determine where further evaluation was required. The persons responsible for making these contacts and obtaining this information would be a water quality specialist and a soil scientist. In the past, persons and agencies have been somewhat reluctant

to divulge specific information regarding sediment pollution problems, but we would hope to overcome this situation by providing an interviewer having an agricultural background together with experience in public relations. Phase 2 of the study would involve the development of best management practices for sediment control. To assist in the development of these practices, a policy advisory committee would be established. Such a committee would hopefully consist of representatives from the following groups: The Department of Natural Resources and Conservation, the Department of Health and Environmental Sciences, the Department of Fish and Game, Cooperative Extension Service, the Montana Association of Conservation Districts, the U. S. Department of Agriculture, Soil Conservation Service, Department of State Lands and representatives from an environmental organization. This committee would work with other technical people working not only on this proposal but also others having expertise in this particular area. While public participation will be sought throughout the life of this project, public hearings on draft Best Management Practices will be held to provide the general public with an opportunity for input.

Phase 3 would consist of the actual administration of a program under the Montana Conservation District law to insure that best management practices were being applied to the land. The Lewis and Clark Conservation District has tentatively been selected as a model to undertake this responsibility.

The Montana State Conservation District Law provides the district supervisors with broad powers to conduct surveys of erosion and sediment damages, to carry out erosion preventive and control measures and to develop comprehensive plans for the conservation of soil resources and the prevention of soil erosion. The districts also have the power to adopt land use regulations in the interest of conserving soil and preventing or controlling erosion. This authority has never been used, partially due to the requirement that a referendum vote is

required before such regulations can be adopted. It is our opinion that with a good public relations and information program, a successful vote could be achieved.

Under this type of control program, possible sediment problems would be brought to the attention of the supervisors who would determine the existence and extent of such problems. If warranted, they would require the application of best management practices to correct given problems. If the individual responsible for the problem fails to take the necessary corrective steps, the supervisors could arrange for correction of the problem and assess the charges to the land owner. To assist the soil conservation district with the administrative and technical responsibilities, a program manager would be hired. This individual would have an agricultural background with experience in land use and the application of soil conservation practices.

It will be necessary to carry on an extensive education program throughout the project period. A sediment control program such as the one included in this proposal will be a significant change for the agricultural community. A good public information and education program is essential if the program is to be a success.

The area covered by this study would be the entire state of Montana exclusive of designated Section 208 planning areas (Figure 1). While this proposed study would not encompass those designated 208 areas, there would be considerable coordination between the agencies responsible for those plans and the work to be conducted under this proposal to insure minimal duplication of effort.

The principal agencies involved in this proposal would be the Department of Health and Environmental Sciences and the Department of Natural Resources and Conservation. The Water Quality Bureau of the Department of Health and Environmental Sciences is responsible for the administration of a water pollution

control program within the state of Montana and would therefore be a logical group to carry out this proposal. The staff of the Water Quality Bureau and the Conservation District Division of the Department of Natural Resources and Conservation provide a wide range of areas of expertise which would be available for consultation throughout this study. While these agencies would be the principal ones involved, a problem such as this will require the cooperative effort of a number of different state and federal agencies to accomplish the desired results. Supervision for the project would be provided by part-time input of both the Department of Health and Environmental Sciences and the Department of Natural Resources and Conservation. The proposed project would be completed within two years of initiation. In order to keep the project officers informed as to the progress of this study, bi-monthly progress reports would be submitted in the form of a letter to those persons. In addition, an interim report would be submitted at the end of the first project year, a draft report two months before the end of the project, and a final report submitted upon completion of the project.

In summary, the proposed project would utilize 3.5 man years during the project period. In addition, in-kind services would be provided in the form of supervision from the Department of Natural Resources and Conservation and Department of Health and Environmental Sciences. The soil scientist and the program manager would be hired under a subcontract with the Department of Natural Resources and Conservation.

It would be quite difficult to provide a definite schedule for completion of the various phases as there will be considerable overlapping of efforts. Initial efforts would be to inventory the problems especially within the conservation district selected as a model. The majority of this inventory would be completed during the first year. Likewise during the first year,

the advisory committee and the district supervisors would meet to develop best management practices. Once these practices are developed, the program for administration within the model district could be established.

This proposal provides an excellent opportunity to evaluate one possible approach to sediment control which, if successful, could have wide-spread application.

Respectfully submitted,

John S. Anderson, M.D., Director
DEPARTMENT OF HEALTH AND
ENVIRONMENTAL SCIENCES

TABLE 1

REGULATORY AUTHORITY

1. Montana Conservation District Law, Title 76, Chapter 1, R.C.M. 1947; administered by the Department of Natural Resources and Conservation, Conservation District Division.
2. Natural Streambed and Land Preservation Act of 1975; administered by Conservation Districts with minimum standards set up by Department of Natural Resources and Conservation.
3. PL 92-500, Federal Water Pollution Control Act Amendments of 1972; administered by the Environmental Protection Agency,
4. Montana Water Quality Standards (MAC 16-2.14(10)-S14480); administered by the Department of Health and Environmental Sciences,
5. Montana Water Pollution Control Act (Sec. 69-4801, et. seq., R.C.M. 1947); administered by the Department of Health and Environmental Sciences.
6. Surface Mined Land Reclamation Act; administered by the Department of State Lands.

No. 1050 — County Outline Map (100 to pad)
STATE PUBLISHING COMPANY
Helena

MONTANA

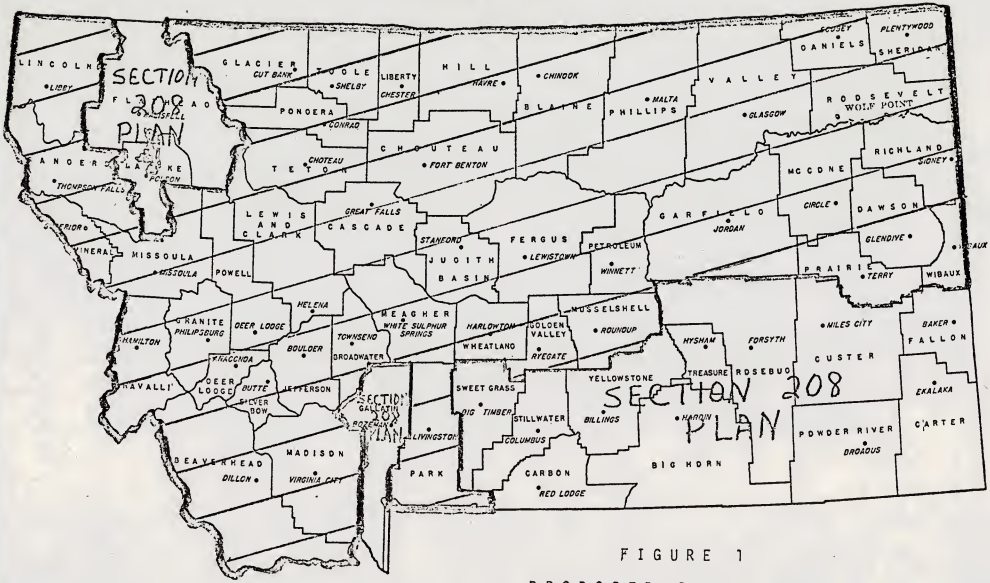
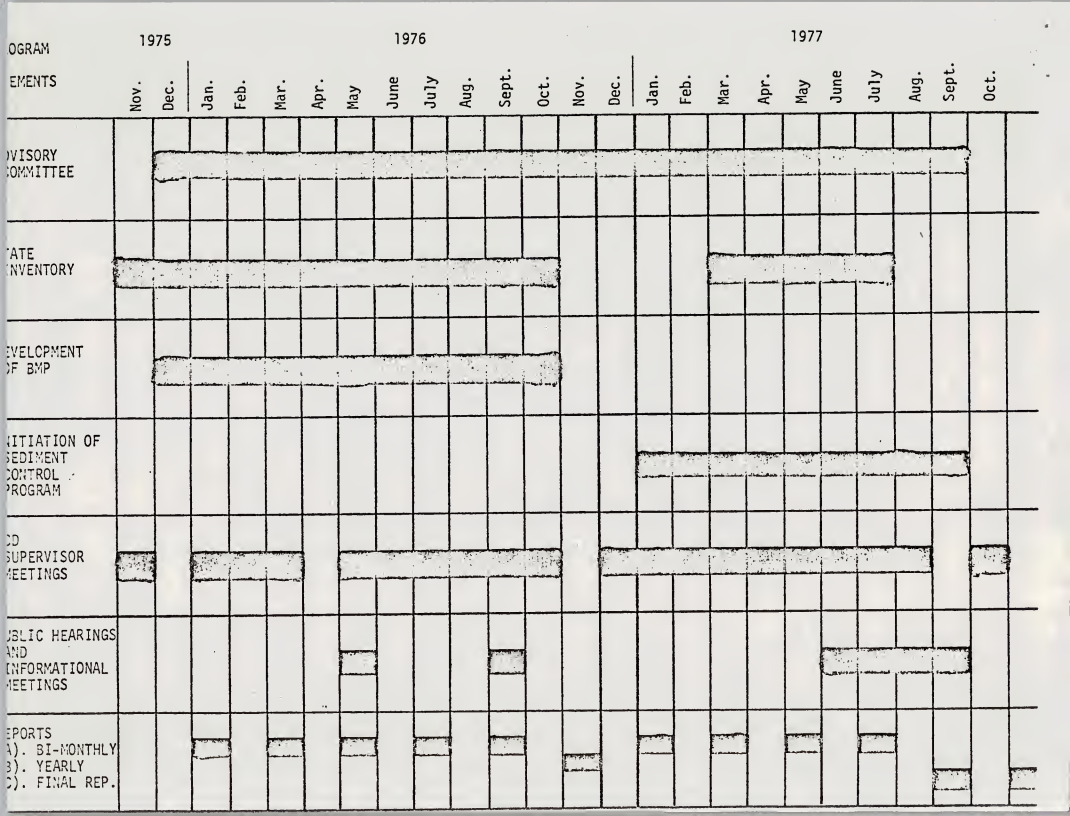


FIGURE 1

PROPOSED STUDY AREA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A). BI-MONTHLY
B). YEARLY
C). FINAL REP.

REQUEST FOR PROPOSAL NO. WA 75-R474

STATEWIDE SEDIMENT CONTROL PROJECT

BUDGET

	First 12 Months	Second 12 Months
Salaries		
Program Manager (14)	$ 13,773	$ 14,874
Water Quality Specialist (14)	13,773	14,874
Soil Scientist (13)	12,563	13,568
Total Wages	$ 40,109	$ 43,316
Benefits (14%)	5,615	6,064
Total Personal Services	$ 45,724	$ 49,380
Indirect Costs (7%)	3,200	3,456
Travel		
Supervisors @ 10 meetings/year, $30/meeting for five members	1,500	1,500
Project Staff	13,909	11,931
Equipment	1,000	- 0 -
Lab Services	1,000	1,000
Miscellaneous Expenses	1,000	500
Communications	200	200
Supplies and Materials	2,500	2,500
Rent	1,000	1,000
Public Hearings and Referendums		2,500
TOTAL BY YEAR	$ 71,033	$ 73,967
TOTAL FOR PROJECT		$145,000

2 Hearings!

Attachment 3

Policy Advisory Subcommittees for State
Sediment Control Program

POLICY ADVISORY SUBCOMMITTEES FOR

STATEWIDE SEDIMENT CONTROL PROGRAM

DNRC/DHES

Provided below are proposed subcommittee assignments from the Policy Advisory Committee for the Statewide Sediment Control Program. We recognize that the following goals and objectives for the subcommittees represent a significant challenge but feel their fulfillment is essential to a successful sediment control program. The purpose, goals and objectives may require revision as subcommittee work develops but will hopefully provide some direction to those involved. We appreciate the efforts of the participants in these committees and welcome any information and/or recommendations you may wish to provide the project coordinators.

Meetings with both individuals and as a group will be called by persons working on this project as the need arises, and you will be contacted accordingly.

GOALS:

To wisely use and manage the land resource for the purpose for which the land is best suited, based upon physical characteristics and limitations, so as to minimize damage to the environment and society resulting from soil erosion and sedimentation.

OBJECTIVES:

To develop reasonable and acceptable Best Management Practices (hereafter referred to as BMP) standards and guidelines which can be implemented to control erosion and sediment using known economically and socially feasible methods which will satisfy state and federal water quality (pollution) legislation.

I. SOCIO-ECONOMIC SUBCOMMITTEE

PURPOSE: To develop guidelines for analyzing the cost-effectiveness of a sediment control program administered by conservation districts which will achieve the above goals and objectives. Such an analysis should also include the cost of implementing the required conservation practices. Thought should be given to protecting the tax base and promoting the general welfare of the people of this state.

Frank Schledorn (SCS)
Dick McConnen (Economist/MSU)
Tony Gies (ASCS)
Leo Kolstad (ASCS)
Leland Schoonover (Environmentalist)

Gladys Elison (RCAC)
Wes Woodgerd (Fish and Game Dept.)
Ora Halvorson (State Representative)
_____ (Sociologist)
_____ (Rancher)
_____ (Farmer)
Edward Mares, Jr. (Montana Association of Counties)
Franklin Grosfield (MACD)
John Reuss (EQC)

The following is recommended as an approach to cost-effective analysis for sediment control:

1. Draw up a list of socio-economic items to consider for cost-effective analysis of sediment control for BMP for both agricultural and non-agricultural uses of land (rangelands, dry croplands, irrigation, woodlands, subdivisions, highways, mining, recreation, etc.).

2. Please include in your list under the previous paragraph your recommendations of the responsibility each segment of society has as represented by land ownership and levels of government. What is the legal and moral responsibility of the land owner? How much control can be put on him by government? How can he economically afford or not afford to control sediment? How much can society afford or not afford for research, education, cost sharing, technical assistance, and this rather new dimension of mandatory control? Can social and economic values be determined in dollars or otherwise?

II. EDUCATION AND INFORMATION SUBCOMMITTEE

PURPOSE: To develop and recommend methods and guidelines for an effective education-information program which can be used by conservation districts for developing a sediment control program, emphasizing the need to control sediment approaches to BMP, and the implementation costs and benefits of the various land use treatments necessary to obtain the goals and objectives as outlined above.

Charles Rust (CES)
Dana Schrupp (CES)
Gladys Elison (RCAC)
Ken Knudson (Fish and Game Dept.)
Sam Rosen (CES)
John DeBree (CES)
Roger Wilson (CES)
Frank Adams (Great Falls Tribune)
Ed Eschler (Office of Public Instruction)

Items to Consider: (The Committee should make a list of items to consider).

III. FORESTRY SUBCOMMITTEE

PURPOSE: To develop or recommend methods for use by conservation districts for analyzing erosion and sediment problems associated with woodlands, to develop model BMP or standards to meet the goals and objectives, and to describe the costs and benefits.

Bob Arnold (State Division Forestry)
Ron Russell (U. S. Forest Service)
Wayne McGaw (Private logger)
Hal Hunter (SCS)
Bob Leprowse (U. S. Plywood Company)

Items to Consider: (The Committee should make a list of items to consider).

IV. SUBDIVISION SUBCOMMITTEE

PURPOSE: To develop or recommend methods for use by conservation districts for analyzing erosion and sediment problems associated with subdivisions or construction sites, to develop BMP or standards to meet the goals and objectives and to describe the costs and benefits.

Duane W. Schieffer (Mont. Land Improvement Contractors Assoc.)
Frank Ferentchak (SCS)
John Andrews (Dept. of Community Affairs)
Bill Milton (EIC)
Dean Zinnecker (Mont. Association of Counties)

Items to Consider: (The Committee should make a list of items to consider).

V. IRRIGATION

PURPOSE: To develop or recommend methods for use by conservation districts for analyzing erosion and sediment problems related to irrigated cropland, to develop model BMP or standards to meet the goals and objectives, and to describe the costs and benefits.

Robert Ellis (Helena Valley Irrigation Board)
Frank Ferentchak (SCS)
Rudy Thompson (Montana Land Improvement Contractors Assoc.)
Joe Hamm
Siv Seidensticker

Items to Consider: (The Committee should make a list of items to consider).

VI. DRY CROPLAND

PURPOSE: To develop or recommend methods for use by conservation districts for analyzing erosion and sediment problems related to dry cropland, to develop model BMP or standards to meet the goals and objectives and to describe the costs and benefits.

Wendell Thacker (SCS)
Hayden Ferguson (Ag. Exp. Station)
Chairman - Local Lewis and Clark Subcommittee
Gilman Mirehouse (State Lands)
Francis Siddoway (Ag. Research)
Glenn Jacobson (State Rep.)
Norman Hollow (Ft. Peck Tribal Board)

Items to Consider: (The Committee should make a list of items to consider).

VII. RANGELAND SUBCOMMITTEE

PURPOSE: To develop or recommend methods for use by conservation districts for analyzing erosion and sediment problems associated with rangeland, to develop model BMP or standards to meet the goals and objectives and to describe the costs and benefits.

Bob Ross (SCS)
Don Burnham
Joe Wirak (SCS)
Gilman Mirehouse (State Lands)
Francis Siddoway (Ag. Research)
Liter Spence (Fish and Game Dept.)
Pete Jackson (MACD)
Mons Teigen (Mont. Stockgrowers)

Items to Consider: (The Committee should make a list of items to consider).

VIII. TRANSPORTATION

PURPOSE: To develop or recommend methods for use by conservation districts for analyzing erosion and sediment problems associated with transportation routes and facilities, to develop model BMP or standards to meet the goals and objectives and to describe the costs and benefits.

Bill Larson (State Highway Dept.)
Chairman - local committees
R. Faubian (Burlington Northern)
Edward Mares, Jr. (Montana Association of Counties)

Items to Consider: (The Committee should make a list of items to consider).

IX. MINING

PURPOSE: To develop or recommend methods for use by conservation districts for analyzing erosion and sediment problems associated with mining activities, to develop model BMP or standards to meet the goals and objectives, and to describe the costs and benefits.

Items to Consider: (The Committee should make a list of items to consider).

DEFINITIONS

CONSERVATION DISTRICT: (Soil and Water Conservation District)

A public organization created under state enabling law as a special purpose district to develop and carry out a program of soil, water and related resource conservation use and development within its boundaries, a subdivision of state government with a local governing body.

ACCELERATED EROSION:

Erosion much more rapid than normal, natural or geologic erosion, primarily as a result of the influence of the activities of man, in some cases, of other animals or natural catastrophies that expose base surfaces; for example, fires.

SEDIMENT:

Solid material, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice and has come to rest on the earth's surface.

NONPOINT POLLUTION:

Are organic and inorganic materials entering surface and groundwater from nonspecific or unidentified sources in sufficient quantity to constitute a pollution problem.

U.S.L.E.:

The basic tool for estimation of sediment from sheet and rill erosion; A=RKLSPC: A=Average annual soil loss in tons per acre; R=Rainfall factor; K=Soil erodibility factor; L=Length of slope; S-Percent of slope; P= Conservation practice factor; C=Cropping and management factor.

RILL EROSION:

An erosion process in which numerous small channels only several inches deep are formed; occurs mainly on recently cultivated soils.

SHEET EROSION:

The removal of a fairly uniform layer of soil from the land surface by runoff water.

GULLY EROSION:

The erosion process whereby water accumulates in narrow channels and over short periods, removes the soil from this narrow area to considerable depth ranging from one to two feet to as much as 75 to 100 feet.

CONTOUR:

An imaginary line on the surface of the earth connecting points of the same elevation.

DESIGNATED "208" AREA:

An area designated by the Governor as having substantial water quality control problems for which an areawide waste treatment management plan is to be completed.

*("Advisory capacity" means furnishing advice, gathering information, making recommendations, and performing such other activities as may be necessary, and does not mean administering a program or function or setting policy.)

This is not a Governor's Advisory COmmittee.

Attachment 4

Questionnaire: Nature and Extent of Agricultural Nonpoint Source Pollution

1976 - 1977 INVENTORY

NATURE AND EXTENT OF AGRICULTURAL NONPOINT SOURCE POLLUTION

STATEWIDE SEDIMENT CONTROL PROJECT/STATEWIDE 208 PROJECT

(Questionnaire)

CONSERVATION DISTRICT _____ DRAINAGE BASIN _____

1. WHAT IS THE APPROXIMATE AREA OF THIS DRAINAGE BASIN WITHIN YOUR DISTRICT?

   _____ acres (All following questions refer to the portion of this basin in your district only.)

2. WHAT ARE THE PREDOMINANT LAND USES WITHIN THIS DRAINAGE BASIN?

   Rangeland/Pasture _____acres _____% Forest Lands _____acres _____%

   Dry Cropland _____acres _____% Urban/builtup _____acres _____%

   Irrigated Cropland _____acres _____% Other(_____) _____acres _____%

(3.) APPROXIMATELY HOW MANY ACRES IN THIS DRAINAGE BASIN ARE ANNUALLY OR FREQUENTLY AFFECTED BY ACCELERATED SOIL EROSION BY WATER AND TO WHAT DEGREE*?

LAND USE	DEGREE OF EROSION		
	Slight Sheet** (acres)	Moderate Rill*** (acres)	Severe Gully**** (acres)
Rangeland/Pasture			
Dry Cropland			
Irrigated Cropland			
Forest Lands			
Urban/Builtup Areas			
Other			

* Accelerated Erosion--Is a much more rapid than normal natural (geologic) erosion, primarily as a result of the influence of man's activities.

** Sheet Erosion--A removal of a fairly uniform layer of soil from the land surface by runoff water.

*** Rill Erosion--An erosion process in which numerous small channels, only several inches deep, are formed.

**** Gully Erosion--An erosion process whereby water accumulates in narrow channels and over short periods, removing the soil from this narrow area to depths of one foot or more.

Note: Circled questions are to be plotted on the county map provided. Use symbols indicated on the attached sample map.

4. IN YOUR ESTIMATION, WHAT PERCENT OF ACCELERATED WATER EROSION PROBLEMS COULD BE PREVENTED OR CONTROLLED BY PROPER LAND MANAGEMENT PRACTICES?

Rangeland/Pasture _____% Forest Lands _____%

Dry Cropland _____% Urban/builtup _____%

Irrigated Cropland _____% Other (_____) _____%

5. APPROXIMATELY HOW MANY ACRES IN THIS DRAINAGE BASIN ARE AFFECTED BY ACCELERATED WIND EROSION?

Rangeland/Pasture _____ acres

Cropland _____ acres

Other (_____) _____ acres

6. IN YOUR ESTIMATION, WHAT PERCENT OF WIND EROSION PROBLEMS COULD BE PREVENTED OR CONTROLLED BY PROPER LAND MANAGEMENT PRACTICES?

Rangeland/Pasture _____%

Cropland _____%

Other (_____) _____%

7. APPROXIMATELY HOW MANY ACRES OF RANGELAND IN THIS DRAINAGE BASIN HAVE BEEN CONVERTED TO CROPLAND SINCE 1972? _____ acres

ON WHAT PERCENT OF THIS BREAKUP ARE PROPER LAND MANAGEMENT PRACTICES BEING USED? _____%

WHAT PERCENT OF THIS BREAKUP IS CLASS 4-6 LAND? _____%

ESTIMATE THE PERCENT OF THIS BREAKUP THAT IS BEING IRRIGATED _____%

WHAT IS THE SOURCE OF THE IRRIGATION WATER? wells _____% streams _____%

8. WHAT OTHER SIGNIFICANT CHANGES IN LAND USE HAVE OCCURRED IN THIS DRAINAGE BASIN SINCE 1972? (e.g., cropland to subdivision)

	LAND USE		LAND USE	ACRES
From	_____	to	_____	_____
From	_____	to	_____	_____
From	_____	to	_____	_____

9. FROM YOUR OBSERVATIONS, ESTIMATE THE NUMBER OF MILES WHERE STREAMBANK EROSION MAY BE SIGNIFICANT IN THIS DRAINAGE BASIN _____ miles

WHAT ARE THE MAJOR CAUSES OF THE STREAMBANK EROSION? (e.g., overgrazing, natural processes (such as flooding), construction activities, etc.)

_____

_____

10. WHAT OTHER LAND DISTURBING ACTIVITIES ARE CREATING SIGNIFICANT SOIL EROSION PROBLEMS IN THIS DRAINAGE BASIN.

	Acres	or	Miles
Subdivision Construction	_____		_____
Road Construction	_____		_____
Pipelines	_____		_____
Transmission Lines	_____		_____
Mining	_____		_____
Logging	_____		_____
Stream Modification	_____		_____
Others:			
_____	_____		_____
_____	_____		_____

11. ARE THERE ANY SPECIAL OR UNIQUE PROBLEMS (EXISTING OR ANTICIPATED) IN THIS DRAINAGE BASIN WHICH NEED CONSIDERATION? _____

IF SO, WHAT? _____

_____

12. FROM YOUR OBSERVATIONS, ESTIMATE THE NUMBER OF MILES OF STREAMS WHICH ARE NEARLY OR COMPLETELY DEWATERED BY IRRIGATION WITHDRAWAL._____ miles

13. APPROXIMATELY HOW MANY ACRES IN THE BASIN ARE AFFECTED BY SALINITY?

Dryland Saline Seeps _____ acres

Irrigation Salinity _____ acres

ARE THE AREAS AFFECTED BY THIS SALINITY INCREASING, DECREASING, OR STAYING THE SAME?

Dryland Saline Seeps _____

Irrigation Salinity _____

14. WHAT WATER QUALITY PROBLEMS ARE KNOWN OR THOUGHT TO BE THE RESULT OF SALINE SEEP DEVELOPMENT IN THIS BASIN? (e.g., livestock deaths, sour wells, etc.)

_____

_____

15. ESTIMATE THE NUMBER OF ANIMAL CONFINEMENT FACILITIES* IN THE BASIN FROM WHICH SURFACE RUNOFF ENTERS A STREAM.

Less than 300 animals _____

300 - 1,000 animals _____

More than 1,000 animals _____

16. APPROXIMATELY HOW MANY ACRES OF THIS BASIN ARE UNDER AN ACTIVE CONSERVATION PLAN? _____ acres

17. DOES THE CONSERVATION DISTRICT LONG RANGE PROGRAM ADEQUATELY COVER INVENTORY OF NONPOINT POLLUTION SOURCES AND A PROGRAM FOR ITS PREVENTION OR CORRECTION?

Yes _____ No _____

18. IS ADDITIONAL DATA AND/OR RESEARCH NEEDED TO REASONABLY ASSESS THE NATURE AND EXTENT OF NONPOINT SOURCE POLLUTION IN THIS BASIN? IF SO, WHAT AND WHERE.

_____

_____

_____

_____

*Animal confinement facility means a pen or other enclosure used, or capable of being used, for the feeding or holding of animals for periods in excess of 30 consecutive days but does not include land used for the growing of crops or vegetation for animal feeding.

This would not include wintering operations where livestock are supplementally fed on cropland or pasture instead of being penned up, or normal summer grazing where stocking rates are such that vegetative ground cover is retained. Likewise, it would not include farmstead corrals used for sorting or holding animals for short durations.

19. ADDITIONAL COMMENTS, OR CLARIFICATION OF ANY OF ABOVE ITEMS:

20. LIST ALL PERSONS INVOLVED IN FILLING OUT THIS QUESTIONNAIRE AND ALL REFERENCE MATERIAL USED.

Soil erosion (E)

Streambank erosion xxxxx

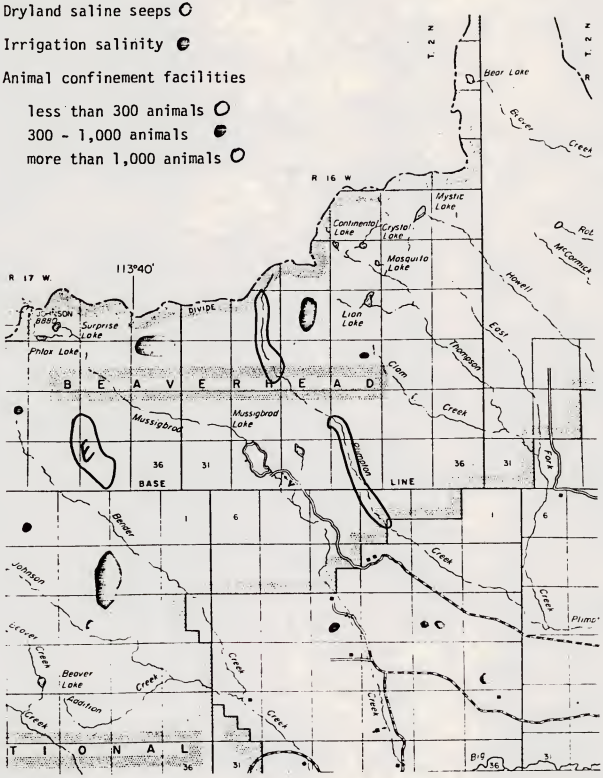
Dewatered streams

Dryland saline seeps

Irrigation salinity

Animal confinement facilities

less than 300 animals

300 - 1,000 animals

more than 1,000 animals